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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/726,454      | 12/01/2000  | Hiroshi Hattori      | 107850              | 2022             |

25944 7590 04/05/2005

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

BRINICH, STEPHEN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2624

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/726,454

**Applicant(s)**

HATTORI, HIROSHI

**Examiner**

Stephen M Brinich

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,9-12,16 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 3-5,7,8,13-15,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 6, 9, 11-12, 16, & 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimatani et al.

Re claims 1-2, 5-6, 9, 11-12, 15-16, & 19, Shimatani et al discloses (Figures 16-20; column 8, lines 45-64) an image forming arrangement including a set of predetermined patterns each having a plurality of tiled elements of threshold values. These patterns are offset from each other, and are filled consecutively (i.e. pixels are filled in the order of the threshold amounts in the matrices) to create a desired shade.

3. Claims 1-2, 6, 9, 11-12, 16, & 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuzuki.

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Re claims 1-2, 5-6, 9, 11-12, 15-16, & 19, Tsuzuki discloses (Figures 7a-7b; column 20, lines 38-58) an image forming arrangement including a set of predetermined patterns each having a plurality of tiled elements of threshold values. These patterns are offset from each other, and are filled consecutively (i.e. pixels are filled in the order of the threshold amounts in the matrices) to create a desired shade.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimatani et al or Tsuzuki.

Re claim 21, Shimatani et al or Tsuzuki does not disclose the use of a computer program for generating the matrices of Figures 16-20. The algorithm for generating these matrices is known from the teachings of these references; the implementation of this algorithm in the form of a computer program for the purpose of avoiding the need to generate the matrices manually

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or to build special-purpose hardware for matrix generation would be an expedient obvious to one of ordinary skill in the art.

Re claims 22-24, the blocks depicted in Figure 7a of Tsuzuki are 6x6 matrices, which will inherently include a 3x3 center block with additional areas extending at the top, bottom, and each side of this center block.

Further re claims 22-24, the blocks depicted in Figures 16-20 of Shimatani et al are 4x4 matrices. However, Shimatani et al discloses (column 7, lines 16-20) that the matrix size may be varied. In the case where the matrix size is so varied to 5x5, the matrix will inherently include a 3x3 center block with additional areas extending at the top, bottom, and each side.

6. Claims 10 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimatani et al in view of Applicant's admitted Prior Art.

Re claims 10 & 20, Shimatani et al does not describe the use of the described matrix for both color and monotone images, but rather describes a "gray level" image. The use of a "gray level" for both color (presumably meaning the level of each of the colors used in a given separation) and monochrome images is admitted to be known Prior Art by Applicant (page 1, lines 18-19). The use of the Shimatani et al halftoning arrangement for both color and monochrome images as described by Applicant in

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order to render an image of either type would be an expedient obvious to one of ordinary skill in the art.

***Allowable Subject Matter***

7. Claims 3-5, 7-8, 13-15, & 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 3-4 & 13-14, the art of record does not teach or suggest the recited arrangement a shade levels at the end of a row of a first pattern and a next higher shade level in a second pattern.

Re claims 5, 7-8, 15, & 17-18, the art of record does not teach or suggest the recited row arrangement of sequential shade levels.

***Response to Arguments***

9. Applicant's arguments with respect to the rejection of claims 21-24 under 35 USC §101 have been found to be persuasive. This rejection is withdrawn.

10. Applicant's arguments with respect to claims 1-2, 6, 9, 11-12, 16, & 19 have been considered but are moot in view of the new ground(s) of rejection.

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**Conclusion**

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanioka disclose an additional example of halftone matrix array offset tiling.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 571-272-7430. The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2600 Customer Service center at 703-306-0377.


If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 703-308-7452.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 703-872-9306.

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Hand-carried or courier-delivered correspondence pertaining  
to this application should be directed to

US Patent and Trademark Office  
220 South 20<sup>th</sup> Street  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington VA 22202

  
Stephen M Brinich  
Examiner  
Art Unit 2624

smb  
March 31, 2005



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